

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
12 August 2004 (12.08.2004)

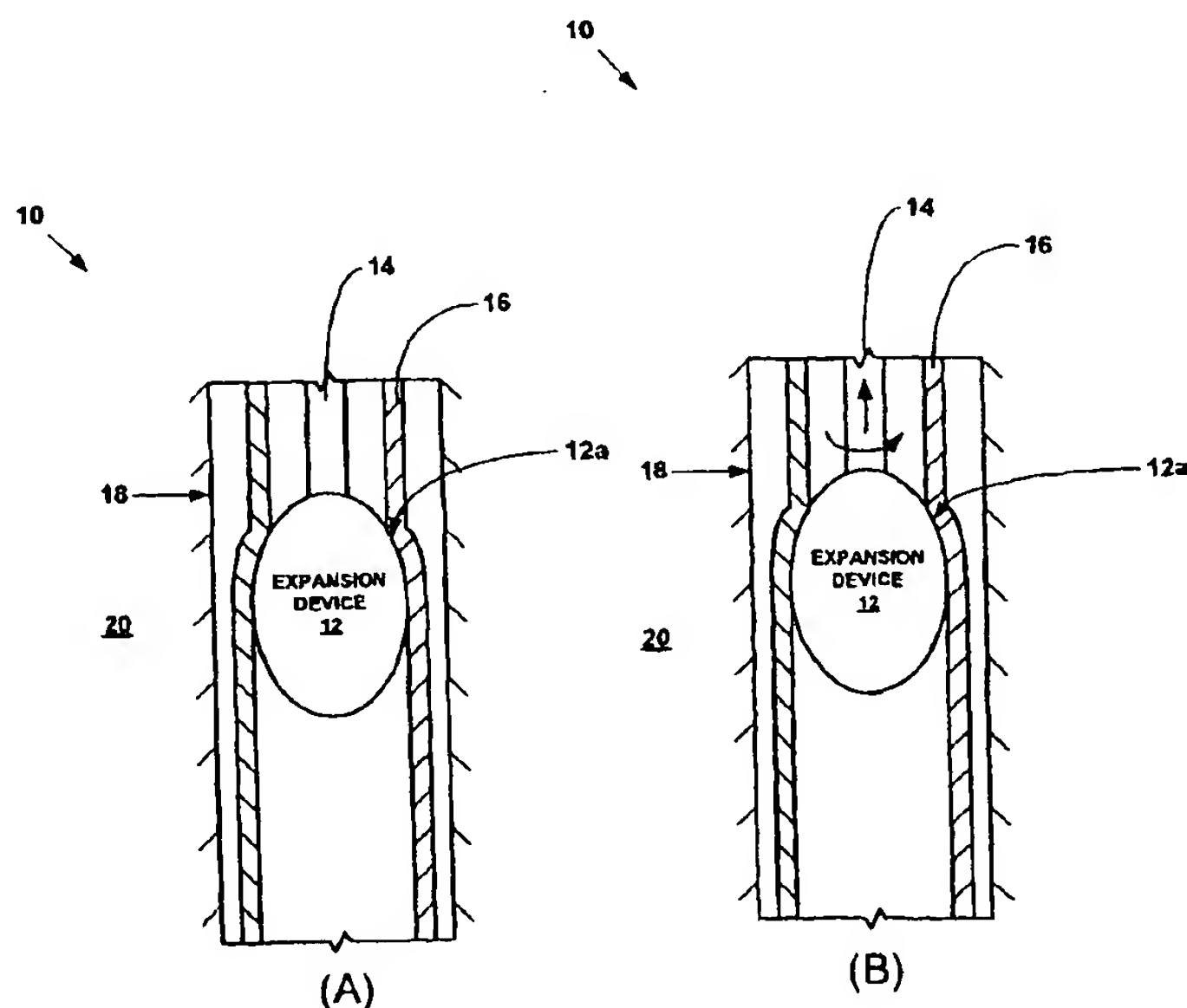
PCT

(10) International Publication Number  
**WO 2004/067961 A3**

- (51) International Patent Classification<sup>7</sup>: **E21B 43/10**
- (21) International Application Number:  
PCT/US2004/002122
- (22) International Filing Date: 26 January 2004 (26.01.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/442,938 27 January 2003 (27.01.2003) US
- (71) Applicant (for all designated States except US): **ENVEN-  
TURE GLOBAL TECHNOLOGY** [US/US]; 16200 A.  
Park Row, Houston, TX 77084 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SHUSTER, Mark**  
[US/US]; 19115 Prospect Ridge Lane, Houston, TX 77094  
(US). **WADDELL, Kevin, K.** [US/US]; 11007 Sprucedale  
Court, Houston, TX 77070 (US). **KENDZIORA, Larry**  
[US/US]; 6518 Williams School Court, Needville, TX  
77461 (US). **COSTA, Scott** [US/US]; 2011 Willow Point,  
Kingwood, TX 77330 (US).
- (74) Agent: **MATTINGLY, Todd**; Haynes and Boone, L.L.P.,  
901 Main Street, Suite 3100, Dallas, TX 75202 (US).
- (81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.
- (84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-  
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,  
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,  
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,  
ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:  
— of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

(54) Title: LUBRICATION SYSTEM FOR RADIALY EXPANDING TUBULAR MEMBERS



(57) Abstract: A lubrication system for lubricating an interface (22) between one or more expansion surfaces (12 a) of an expansion device (12) and one or more interior surfaces (16a) of a tubular member (16) during a radial expansion of the tubular member (16) using the expansion device (12).

**BEST AVAILABLE COPY**



**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

14 April 2005

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/02122

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : E21B 43/10  
US CL : 166/380,384,207,242.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 166/380,384,207,242.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
noneElectronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 6,557,640 B1 (COOK et al) 06 May 2003 (06/05/2003), see entire document.	1-3,6-9,12-15,18-37,65,66,68,70-72,125-128,138,141-145 and 147-151
XP	US 6,568,471 B1 (COOK et al) 27 May 2003 (27/05/2003), see entire document.	21-23,43-45,65 and 66

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

19 August 2004 (19.08.2004)

Date of mailing of the international search report

24 FEB 2005

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
Facsimile No. (703)305-3230

Authorized officer

William P Neuder *V. Hodge*  
Telephone No. 703-308-2168

Form PCT/ISA/210 (second sheet) (January 2004)

BEST AVAILABLE COPY

**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US04/02122

Continuation of B. FIELDS SEARCHED Item 3:  
EAST

Form PCT/ISA/210 (extra sheet) (January 2004)

**BEST AVAILABLE COPY**